Remarks

I. Status of claims

Claims 1-21 are pending.

Claims 1-7 are allowed.

Claims 9, 13, 14, 16, 20, and 21 have been rewritten in independent form in response to the Examiner's indication that claims 9-14 and 16-21 that such claims would be allowable if rewritten in independent form. Claims 8-12 and 17-19 depend from claims 9 and 16, respectively; therefore, claims 8-12 and 17-19 are patentable at least the same reasons as claims 9 and 16.

IV. Claim rejections under 35 U.S.C. § 103

The Examiner has rejected claims 8 and 15 under 35 U.S.C. § 103(a) over Goldenberg ("Automatic layout of variable-content print data") in view of Geigel (U.S. 2002/0122067).

A. Independent claim 8

Independent claim 8 recites:

> Claim 8 (currently amended): A method of producing a layout of fixed aspect ratio objects on a page, comprising:
>
> generating a binary tree structure comprising
>
> a plurality of leaves, wherein each of the leaves corresponds to a respective one of the objects, and
>
> a plurality of nodes including a root node, wherein each of the nodes corresponds to a respective partition of the page;
>
> for each of the nodes in the binary tree structure, determining a respective aspect ratio and a relative size of a respective bounding box containing all bounding boxes respectively determined for all child nodes branching from the node, wherein the determining comprises

for each given one of the nodes corresponding to a respective horizontal partition of the page, determining relative sizes of the respective bounding boxes of all immediate children of the given node such that horizontal dimensions of the bounding boxes of all the immediate children of the given node are equal, and

for each particular one of the nodes corresponding to a respective vertical partition of the page, determining relative sizes of the respective bounding boxes of all immediate children of the given node such that vertical dimensions of the bounding boxes of all the immediate children of the given node are equal; and

producing a layout of the objects on the page based on the bounding box determined for the root node.

The rejection of claim 8 under 35 U.S.C. § 103(a) over Goldenberg in view of Geigel should be withdrawn because Goldenberg in view of Geigel does not disclose or suggest all the elements of the claim.

For example, Goldenberg in view of Geigel does not disclose or suggest the "determining" element of claim 8, where "the determining comprises for each given one of the nodes corresponding to a respective horizontal partition of the page, determining relative sizes of the respective bounding boxes of all immediate children of the given node such that horizontal dimensions of the bounding boxes of all the immediate children of the given node are equal, and for each particular one of the nodes corresponding to a respective vertical partition of the page, determining relative sizes of the respective bounding boxes of all immediate children of the given node such that vertical dimensions of the bounding boxes of all the immediate children of the given node are equal."

Goldenberg does not disclose or suggest for each given one of the nodes corresponding to a respective horizontal/vertical division of the page, determining relative sizes of the respective bounding boxes of all immediate children of the given node such that horizontal/vertical dimensions of the bounding boxes of all the immediate children of the given node are equal. Instead, Goldenberg discloses that for fixed-dimension modules the size of each bounding

rectangle is set by adding up the sizes of the containing rectangles into which each module fits, where each containing rectangle is tall and wide enough to contain its module (see, e.g., § 3.2.2.1).

Geigel also does not disclose or suggest for each given one of the nodes corresponding to a respective horizontal/vertical division of the page, determining relative sizes of the respective bounding boxes of all immediate children of the given node such that horizontal/vertical dimensions of the bounding boxes of all the immediate children of the given node are equal. In pertinent part, Geigel discloses a page image placement module that uses a second genetic evolution algorithm to generate genetic structures of page layouts for images that are assigned to a given page (see abstract and ¶ 119). Geigel, however, does not even hint that the operation of the image placement module involves for each given one of the nodes corresponding to a respective horizontal/vertical division of the page, determining relative sizes of the respective bounding boxes of all immediate children of the given node such that horizontal/vertical dimensions of the bounding boxes of all the immediate children of the given node are equal. Instead, Geigel discloses that the image placement module determines the absolute positions of the images on each of the album pages by evolving a genome that defines a respective layout of all of the images that have been assigned to the page by the page creator module (see ¶ 126: "The complete genome is comprised of the image positions of all images to be placed."). For each of the album pages, the genome that has the highest fitness score is selected as the image layout for that album page (see ¶¶ 145, 153, 155, and FIGS. 23-26). In the process of evolving the floating point array genome, each image is placed individually on the page, without regard to relative sizes of any bounding boxes of nodes corresponding to respective partitions of a page.

For at least these reasons, the rejection of claim 8 under 35 U.S.C. § 103(a) over Goldenberg in view of Geigel should be withdrawn.

B. Independent claim 15

Independent claim 15 recites elements that essentially track the pertinent elements of claim 8 discussed above. Therefore, claim 15 is patentable over Goldenberg in view of Geigel for at least the same reasons explained above in connection with claim 8.

III. Conclusion

For the reasons explained above, all of the pending claims are now in condition for allowance and should be allowed.

Charge any excess fees or apply any credits to Deposit Account No. 08-2025.

Respectfully submitted,

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